UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

FEDERAL HOUSING FINANCE AGENCY, AS CONSERVATOR FOR THE FEDERAL NATIONAL MORTGAGE ASSOCIATION AND THE FEDERAL HOME LOAN MORTGAGE CORPORATION,

Plaintiff,

-against-

NOMURA HOLDING AMERICA INC., et al.,

Defendants.

No. 11-cv-6201 (DLC)

ECF Case

DEFENDANTS' REPLY MEMORANDUM IN SUPPORT OF THEIR MOTION TO EXCLUDE CERTAIN TESTIMONY OF CHARLES D. COWAN

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February 2, 2015

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Rules

Defendants respectfully submit this reply memorandum in support of their motion, pursuant to Federal Rules of Evidence 403 and 702 and *Daubert* v. *Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), to exclude certain trial testimony of Charles D. Cowan related to his purported extrapolation of the results of John A. Kilpatrick's automated valuation model.

ARGUMENT

Defendants' motion to exclude portions of Cowan's testimony is based on two simple propositions. First, Cowan should adhere to his stated confidence level of 95%, and should not be permitted to selectively abandon that confidence level when doing so enables him to produce numbers more favorable to plaintiff's position. Second, Cowan should accept the opinions offered by Kilpatrick, whose data Cowan purports to extrapolate. Both propositions are grounded in basic statistics and the nature of the extrapolation process, which is designed to generalize sample-level results to the population. Plaintiff's opposition is entirely nonresponsive to these criticisms. It mischaracterizes defendants' arguments, and then offers rebuttals to the arguments it has made up out of whole cloth. Although plaintiff tries mightily to knock down the straw men raised in its own brief, it has not addressed (much less refuted) the arguments actually raised in defendants' motion.[1]

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[1] Plaintiff argues that Dr. Barnett's declaration in support of defendants' motion contains untimely expert testimony. Opp. at 14. It is well settled, however, that a party may submit an expert declaration in connection with *Daubert* briefing—as both parties have done on other occasions in this very case. *See, e.g.*, December 5, 2014 Declaration of Jerry A. Hausman (submitted in support of defendants' Motion to Exclude the Testimony of John Kilpatrick); Dec. 19, 2014 Declaration of Albert J. Lee (submitted in opposition to the same motion). Furthermore, the two points made by Dr. Barnett are ones he has made previously. *See, e.g.*, Ex. 1 (Barnett Report) at 18 n.42; Ex. 2 (Barnett Dep.) at 75:6-77:12, 87:10-19.

Expert opinions that are not supported by a reliable methodology and the data underlying such opinions are subject to exclusion pursuant to Rule 702. *Ruggiero* v. *Warner-Lambert Co.*, 424 F.3d 249, 255 (2d Cir. 2005) ("[W]hen an expert opinion is based on data, a methodology, or studies that are simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony.") (internal quotation marks omitted). Although certain methodological errors speak to weight rather than admissibility, a court is still bound to exclude evidence that—as here—rests on demonstrably false premises or contains serious, objective flaws. *See, e.g.*, *In re Elec. Books Antitrust Litig.*, 2014 WL 1282298, at *5-7 (S.D.N.Y. Mar. 28, 2014) (excluding expert testimony where the methodology "misclassified" data and was based on "demonstrably false assumptions").

I. COWAN ABANDONS HIS STATED CONFIDENCE LEVEL OF 95 PERCENT.

In procuring this Court's approval of its sampling methodology, plaintiff repeatedly stated that Cowan would extrapolate Kilpatrick's results to a 95% confidence level. (Mot. at 14.) Cowan's purported recalculations of the "true" percentages of loans that fall into various LTV ranges, which appear in Table 8 and Chart 1 of his report, fail to hew to this promise. (Ex. 3 (Cowan Report) at Table 8 & Chart 1.) To arrive at his results, Cowan first uses simulated property values (produced by his Monte Carlo simulation) to recalculate the LTV ratio for each sample loan. (*Id.* at 14.) He then compares these recalculated LTV ratios to the loan-tape LTV ratios. Cowan concludes that the loan-tape LTV ratios were understated, at a 95% confidence level, for 40 of the 672 loans (6%) in the sample. (*Id.*) For the remaining 632 loans, Cowan reports that there is "no detectible difference" between the recalculated LTV ratio and the loan-tape LTV ratio. (*See* Ex. 4 (Cowan Dep.) at 252:20-253:4.)

For purposes of calculating the "true" percentages of loans that fall into various LTV ranges, however, Cowan effectively ignores his own results by using recalculated LTV ratios for all loans—even those Cowan himself concluded did not have understated LTV ratios at the 95% confidence level. (Ex. 3 (Cowan Report) at 15.) In order to satisfy his own confidence level, Cowan should instead have used the loan-tape LTV ratios for all loans other than the 40 he identified as having an LTV ratio that was understated to a statistically significant degree.

Plaintiff attempts to refute this criticism by distinguishing the statistical significance of the inputs—individual AVM values produced by Kilpatrick—from that of the output—Cowan's extrapolations. According to plaintiff, Cowan's population-level extrapolations reflect a 95% confidence level, even if the individual AVM values produced by Kilpatrick do not. (*See* Opp. at 10-11 (citing the Central Limit Theorem).) Plaintiff argues in turn that the exclusion of individual AVM values because they lack the requisite level of significance would be contrary to basic principles of statistics. (*See id*. at 11 (arguing that "defendants are wrong to assert that Dr. Cowan should have excluded individual AVM values from his extrapolation").)

This argument rests on a fundamental misunderstanding of defendants' motion. As explained above, the contested numbers contained in Table 8 and Chart 1 are the result of a two-step process. The first step is Cowan's Monte Carlo simulation, which relies on Kilpatrick's AVM results to produce simulated values and, in turn, recalculated LTV ratios. Cowan analyzes these simulated LTV ratios and concludes that, at the 95% confidence level, only 40 of the 672 loans (6%) have understated LTV ratios. (Ex. 3 (Cowan Report) at 14.) The second step involves simply aggregating the recalculated LTV ratios to identify the percentage of loans occupying each range of LTV ratios.

Defendants do not contend, as plaintiff suggests, that Cowan should have omitted individual AVM values from his Monte Carlo simulation (the first step) where those values, individually, failed to satisfy a 95% confidence level. Indeed, for purposes of this motion, defendants are not concerned with the first step at all. The motion is instead directed at the second step, which involves simple percentage calculations of Cowan's post-extrapolation results. The problem with the second step is that Cowan uses his simulated LTV ratios for all loans in determining the ranges of LTV ratios into which the loans fall. As his own calculations indicate, however, only 6% of the sample loans have understated LTV ratios. (*Id.*) Thus, in producing the aggregate figures in Table 8 and Chart 1, Cowan should have used simulated LTV ratios only for the 40 loans he identified as having understated LTV ratios—and used loan-tape values for all others. This adjustment would not require Cowan to ignore any inputs. Instead, it would simply require him to respect the results of his own calculations.

Plaintiff asserts that "there are margins of error at the 95% confidence level for the[] extrapolations" in Table 8 and Chart 1, "which can readily be determined from Dr. Cowan's back-up materials." (Opp. at 7.) Plaintiff does not cite any of Cowan's backup materials for this proposition, nor could it. The percentages in these charts are based on simple loan-level averages, which do not permit the construction of confidence intervals for the population.

II. COWAN IMPROPERLY IGNORES KILPATRICK'S DEFINITION OF AN "INFLATED" APPRAISAL.

To perform a valid extrapolation, Cowan was required to accept the assumptions and limitations that Kilpatrick built into his automated valuation model. In calculating the "average inflation" rates for appraisals in each supporting loan group, which appear in Table 6 of

his report,[2] however, Cowan disregards Kilpatrick's definition of "inflated" and "undervalued" appraisals. Kilpatrick defines an appraisal as inflated (or undervalued) only if it is more than one standard deviation above (or below) the corresponding value generated by Kilpatrick's AVM. (Ex. 5 (Kilpatrick Report) at 62 n.161, 64.) Cowan claims to accept Kilpatrick's definition, but in performing his average inflation calculations, Cowan uses simulated appraisal values exclusively—even when the original appraisals are not inflated or undervalued according to Kilpatrick. Had Cowan been faithful to Kilpatrick's results, he would have used an inflation rate of zero whenever the original appraisals were within one standard deviation of the value generated by Kilpatrick's AVM.

By using simulated values for all properties to calculate "average inflation"—even for loan appraisals that Kilpatrick did not find "inflated" or "undervalued"—Cowan effectively rewrites the underlying data. Plaintiff glosses over this point by suggesting that Kilpatrick's definition of "inflated" and "undervalued" appraisals was non-substantive and adopted only "[f]or ease of reference." (Opp. at 15.) This argument is meritless. Kilpatrick's definition was not simply shorthand for an arbitrary category of results; instead, it served as what he called the "arbitration line" for identifying "objectively false" appraisals. (Ex. 6 (Kilpatrick

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[2] Plaintiff (and Cowan, in his supporting declaration) inexplicably claim that Table 6 contains average LTV ratio inflation rates for each supporting loan group, rather than average rates of appraisal inflation. Opp. at 6; Cowan Decl. at 2-3, 8. As the Cowan Report clearly explains, however, Table 6 purports to reflect average appraisal inflation rates—not average LTV inflation rates. Ex. 3 (Cowan Report) at 13 ("Based on the average simulation results, I was able to conclude that the Original Appraisal value reported in the Loan Tapes was higher for 64.7% of the population and the overall average inflation rate is 11.1% . . . ."). Plaintiff's assertion that "the differences between average Reported LTV and the Average Recalculated LTV in fact are *statistically significant—for every single SLG*—at the *95%* confidence level" is therefore baseless. *See* Opp. at 11 (emphasis in original); Cowan Decl. at 6. Cowan never performed any calculations regarding average LTV ratio inflation rates, either in his report or in his backup materials.

June Dep.) at 167:14-21; Ex. 7 (Kilpatrick Feb. Dep.) at 306:18-23 ("I've got a benchmark of one forecast standard deviation above which something has to exceed for it to be materially false.").) Plaintiff cites deposition testimony in which Kilpatrick claims that he is "not suggesting that appraisals below [one standard deviation] don't have the same kind of credibility problems" because he "looked at many of them and found that they, too, suffered from many of the same problems." Opp. at 15 (quoting Ex. 6 (Kilpatrick June Dep.) at 166:25-167:7). The relevant point, however, is that Kilpatrick's AVM—the results of which Cowan purports to extrapolate—provides no basis for inferring that appraisals within one standard deviation of the AVM value are at all incorrect.[3]

As Kilpatrick states in his report, the forecast standard deviation is "one of the most appropriate measures of an AVM's reliability." (Ex. 5 (Kilpatrick Report) at 50.) Kilpatrick's definition of "inflated" and "undervalued" appraisals by reference to the forecast standard deviation thus represents a fundamental judgment about the precision of his model and the scope of his results. Any purported extrapolation of those results must respect Kilpatrick's standard for inflated appraisals. By calculating "average inflation" rates for appraisals that Kilpatrick concludes are not inflated, Cowan directly contradicts the data he claims to extrapolate.

[3] Plaintiff also cites Cowan's deposition testimony that Kilpatrick's definition is "just a mechanism that Dr. Kilpatrick used so that he could winnow down to a smaller set of loans to do the credible review on." Opp. at 5 n.4 (quoting Ex. 4 (Cowan Dep.) at 226:3-227:8). Although Cowan made that speculation at deposition, he also agreed that "all [he] know[s] about . . . how Dr. Kilpatrick defines 'inflation' is written" in Cowan's report—which says that Kilpatrick's "definition" of an "inflated original appraisal is that the value of the original appraisal was more than one standard deviation above his predicted AVM." Ex. 4 (Cowan Dep.) at 229:14-22, 230:15-19. Cowan also admitted that "I haven't discussed" Kilpatrick's definition of inflated appraisals with Kilpatrick. *Id.* at 230:11-12.

III. THERE IS NO INCONSISTENCY IN DEFENDANTS' CRITICISM OF COWAN.

Plaintiff's final contention is that defendants' argument is internally inconsistent. (Opp. at 16.) One standard deviation corresponds to a 68% confidence level. Cowan purports to employ a 95% confidence level. Plaintiff reasons (wrongly) from these two statistics that defendants have asserted that Cowan should simultaneously adhere to both a 95% confidence level and a 68% confidence level. (*Id.*)

This is nonsense. The position defendants advocate is perfectly consistent, and correct: Cowan should filter his inputs according to Kilpatrick's definition (which happens to use a 68% confidence level) and state his outputs at a 95% confidence level. There is nothing contradictory in this approach—indeed, it is precisely what Cowan stated he would do. Plaintiff either misses the point or is seeking to abandon the method Cowan promised to use because plaintiff is unhappy with the results.

CONCLUSION

Cowan's testimony that does not rely on any level of statistical significance, and that ignores Kilpatrick's standard for appraisal inflation and undervaluation, should be excluded as unreliable and misleading.

Dated: February 2, 2015
New York, NY

Respectfully submitted,

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